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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,127	02/19/2004	Kwang-wook Oh	KCL0097US	2678
23413	7590	03/04/2010	EXAMINER	
CANTOR COLBURN, LLP			BEISNER, WILLIAM H	
20 Church Street				
22nd Floor			ART UNIT	PAPER NUMBER
Hartford, CT 06103			1797	
			NOTIFICATION DATE	DELIVERY MODE
			03/04/2010	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

[usptopatentmail@cantorcolburn.com](mailto:usptopatentmail@cantorcolburn.com)

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/783,127	OH ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	WILLIAM H. BEISNER	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 November 2009.  
 2a) This action is **FINAL**.                  2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-5, 7-14 and 16-19 is/are pending in the application.  
 4a) Of the above claim(s) 3-5, 7-14 and 16 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2 and 17-19 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.   | 6) <input type="checkbox"/> Other: _____ .                        |

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election of Group I, Species i), in the reply filed on 6/27/2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
  
2. Claims 3-5, 7-14 and 16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and/or species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 6/27/2007. Note, Applicants did not state which claims encompass the elected species. As a result, it is determined that claims 6 and 15 correspond to elected species i) while claims 1 and 2 are generic. Therefore, claims 1, 2, 6 and 15 will be examined on their merits.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2 and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilding et al.(US 5,587,128).

With respect to claim 1, the reference of Wilding et al. discloses a PCR device (Figure 11) that includes an inlet (16A); an outlet (16D); a PCR channel (22A); a heat source (See column 24, lines 33-41). The reference also includes channels communicated with ports (16B, 16C) that intersect portions of the PCR channel near the inlet and the outlet of the PCR device. These intersecting channels are structurally capable of holding a sol-gel material and functioning as first and second micro-valves because the structure disclosed by the reference of Wilding et al. is structurally capable of being used with a sol-gel material positioned within the microchannels which function as microvalves. Note "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, "[i]nclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." *In re Young*, 75 F.2d \*>996<, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)) (See MPEP 2115). The reference of Wilding et al. does not include additional heat sources other than that required to perform PCR in chamber 22A (See column 24, lines 33-41).

With respect to claims 2 and 17-19, the structure of the device of Wilding et al. is structurally capable of being used with the material recited in claims 2 and 17-19.

### ***Response to Arguments***

5. With respect to the rejection of Claims 1, 2, 6, 15 and 17-19 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, this rejection has been withdrawn in view of

Applicants' amendments to claim 1 and related comments (See pages 6-5 of the response filed 11/17/2009).

6. With respect to the rejection of Claims 1, 2, 6, 15 and 17-19 under 35 U.S.C. 102(b) as being anticipated by Wilding et al.(US 5,587,128), Applicants argue that the rejection is improper for the following reasons:

i) The reference of Wilding et al. disclose only a mechanically operative valve and does not disclose a valve formed as a channel for containing a sol-gel transformable material (See pages 7-8 of the response filed 11/17/2009).

In response, while the reference of Wilding et al. does not disclose the use of a sol-gel material, the reference includes channels that intersect portions of the PCR channel as recited in the claims and are structurally capable of containing a sol-gel material and functioning as micro-valves as recited in the claims. Note a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

ii) Ex parte Thibault is not applicable and/or inappropriate because the sol-gel transformable material are actually operative to permit the material to flow through the channels (See pages 8-9 of the response filed 11/17/2009).

In response, claim 1 as amended no longer positively recites the sol-gel material as part of the claimed structure. As stated previously above, the reference of Wilding et al. includes channels that intersect portions of the PCR channel as recited in the claims and are structurally

capable of containing a sol-gel material and functioning as micro-valves as recited in the claims. Note a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

7. With respect to the rejection of Claims 1, 2 and 17-19 under 35 U.S.C. 102(b) as being anticipated by Mehta et al.(US 5,306,590), this rejection has been withdrawn in view of Applicants' amendments to claim 1 and related comments (See page 9 of the response filed 11/17/2009).

8. With respect to the rejection of Claims 1, 2, 6, 15 and 17-19 under 35 U.S.C. 103(a) as being unpatentable over Blackburn (US 6,875,619) in view of Robotti et al.(US 2002/0054835), this rejection has been withdrawn in view of Applicants' amendments to claim 1 and related comments (See pages 9-13 of the response filed 11/17/2009).

9. With respect to the rejection of Claims 1, 2, 6, 15 and 17-19 under 35 U.S.C. 103(a) as being unpatentable over Blackburn (US 6,875,619) in view of Robotti et al.(US 2002/0054835) taken further in view of Yang et al.(US 6,382,254), this rejection has been withdrawn in view of Applicants' amendments to claim 1 and related comments (See pages 13-14 of the response filed 11/17/2009).

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM H. BEISNER whose telephone number is (571)272-1269. The examiner can normally be reached on Tues. to Fri. and alt. Mon. from 6:15am to 3:45pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael A. Marcheschi, can be reached on 571-272-1374. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/William H. Beisner/  
Primary Examiner  
Art Unit 1797**

WHB